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ABSTRACT

This student learning guide is designed to introduce graphics arts students t the MCS (Modular Composition System) compugraphic typesetting system. Addressed in the individual units of the competency-based guide are the following tasks: programming the compugraphic typesetting system, creating a new file and editing a file, operating a phototypesetter, and manual and automatic quadding (positioning of a line of type). Each unit contains some or all of the following: an introduction that includes information pertaining to the purpose of the unit, performance objectives and competencies covered in the unit, and estimated completion times; one or more assignment sheets that include an assignment, a list of recommended resources, and evaluation criteria; one or more information sheets; one or more worksheets; a unit quiz; and answers to the quiz. (A brief final report describing a related project to update the graphics technology program is attached.) (MN)

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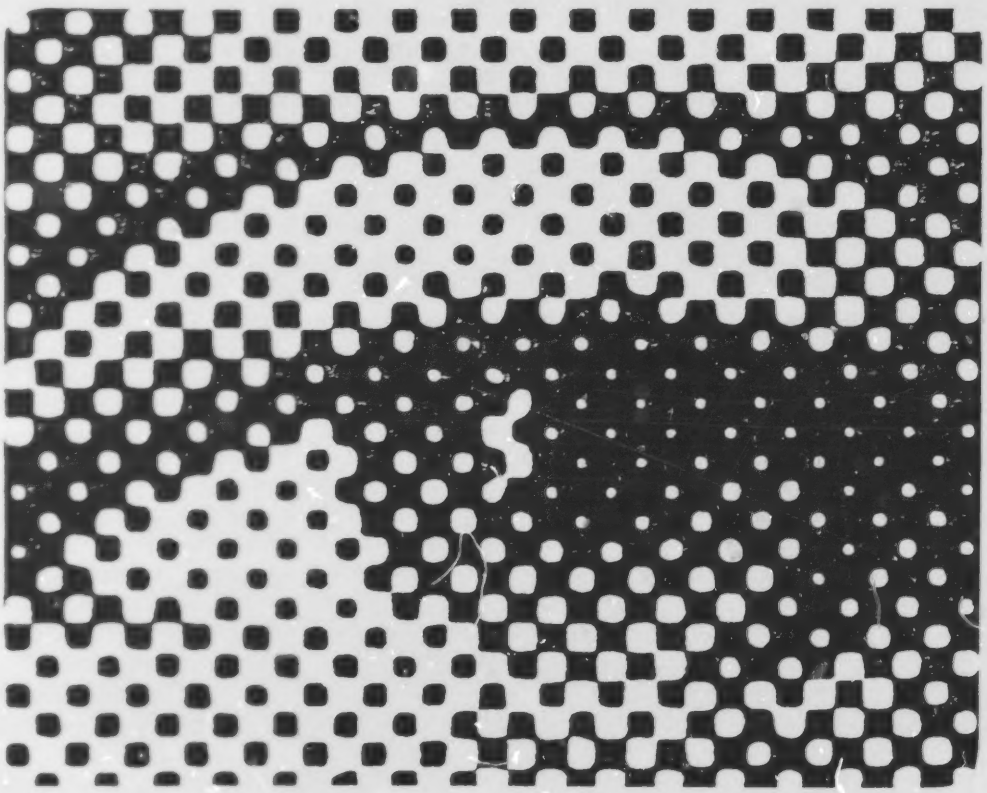
Introduction to the MCS



BEFORE YOU BEGIN:

Within 2 days of receiving this guide you should purchase, from the Bookstore: one 5¼" floppy disk ($3.25 plus tax). Write, **with felt pen,** your name on the label on the disk. You will be using it all year for your jobs.

As a class, submit your disks to the instructor. The instructor will then have them "formatted" by a second year student. Formatting is the process used to initiate blank disks to the MCS system. This involves assigning sections and rows for data storage to the disk magnetically. It's similar to the way grooves are cut into records before music can be recorded on them. Without this formatting the disks cannot be used in the MCS system.

You won't need your job disk for the first task.

Task 1
Programming the MCS

INTRODUCTION

TASK 1: PROGRAMMING THE COMPUGRAPHIC TYPESETTING SYSTEM

PURPOSE: Before you can program the compugraphic to execute various typesetting jobs you need to become familiar with the parts of the typesetting system. To prepare (program) the typesetting system for data entry requires a sequence of steps.

PERFORMANCE OBJECTIVE: Upon completion of this learning guide you will be able to identify the various parts of the compugraphic typesetting system and describe their functions. Also, you will be able to prepare (program) both the MCS5 and MCS10 systems for data entry.

COMPETENCIES:

1. IDENTIFY PARTS OF THE COMPUGRAPHIC SYSTEM AND DESCRIBE THEIR FUNCTIONS.
2. PROGRAM THE MCS5 & MCS10 SYSTEMS FOR DATA ENTRY.

ESTIMATED COMPLETION TIME: one hour

ASSIGNMENT SHEET NO. 1

COMPETENCY 1: IDENTIFY PARTS OF THE COMPUGRAPHIC SYSTEM AND DESCRIBE THEIR FUNCTIONS

ASSIGNMENT: Read & study Information Sheet No. 1 "The Compugraphic Typesetting System" and ask the instructor any questions you might have regarding this information. When you feel you have a good understanding of this material, complete Quiz No. 1 "Compugraphic Typesetting Systems: parts and their functions" and return it to the instructor for evaluation.

RESOURCES:

- **Information Sheet No. 1** "The Compugraphic Typesetting System"
- **Terminology Pages** Pages 26 and 27 in this Learning Guide.
- **Compugraphic Typesetting System**
- **Instructor**
- **Quiz No. 1** "Compugraphic Typesetting Systems: parts and their functions"

EVALUATION: It is essential that you understand the location of various parts of the system and their function before you can proceed to the next assignment. Therefore, **if you miss any answers on the quiz you must retake it until you have mastered this information.**

INFORMATION SHEET NO. 1

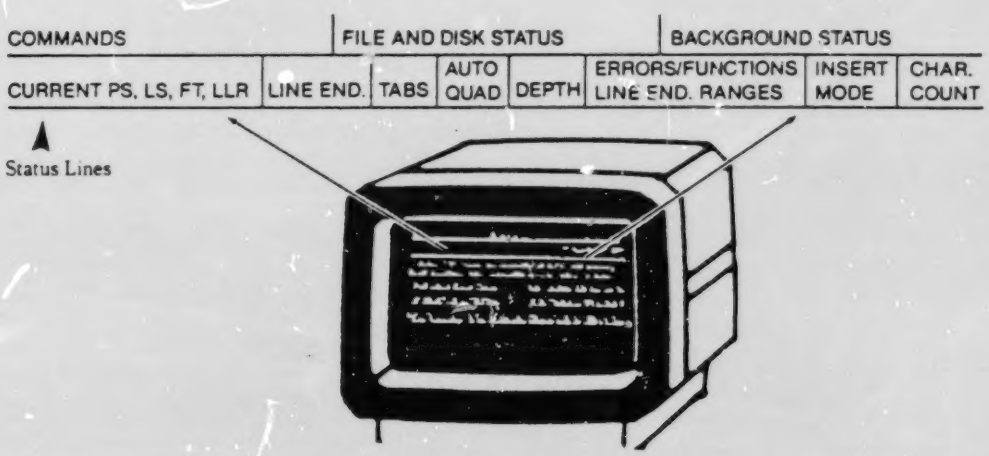
THE COMPUGRAPHIC TYPESETTING SYSTEMS

There are two distinct Compugraphic typesetting systems, the MCS5 (Modular Composition System) and the MCS10 (or the "5" and "10"). There are three MCS5 systems and one MCS10 system in the Visual Media Lab . The 5 and 10 use different controllers and disk drives although the keyboards and monitors are identical for both. The essential differences are that the MCS5 system has a smaller computer memory, (128K compared to 512 K for the 10), and it can handle only 16 typefaces (the 10 can handle 32 typefaces). The MCS10 outputs directly to the typesetter and proof printer. Only the MCS5 that is connected by cable to the photo typesetter can output to the typesetter. The components of the MCS5 and MCS10 systems are described below. **This information sheet is intended to be an overview, to familiarize you with the system. Read it through several times before going on to the next assignment. Later in this guide you will be given detailed steps for operating the system.**

MCS 5

Screen

The MCS screen, a CRT video display terminal, displays up to fifteen lines at a time. The first two lines are system **status lines** and the last thirteen lines display file contents (your typed job). The status lines supply the operator with information pertaining to typesetting parameters, output devices, system errors and file names. The status lines are the means of communication between the operator and the controller, disk drives and output devices.



INFORMATION SHEET NO. 1 - continued

COMMANDS					FILE AND DISK STATUS		BACKGROUND STATUS	
CURRENT PS, LS, FT, LLR	LINE END.	TABS	AUTO QUAD	DEPTH	ERRORS/FUNCTIONS LINE END. RANGES		INSERT MODE	CHAR. COUNT

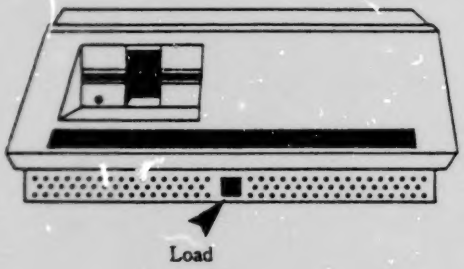
Status Lines

The top status line displays the function or file name currently in use and the active disk drive. Also on the top line are the input/output messages relating to the various devices connected to the MCS.

The second status line displays the typesetting parameters. This line informs the operator of the current point size, linespace, font and line length at the position of the cursor. As characters are typed the line length remaining decreases and status line two informs the operator of the line ending ranges. During input, the system counts the character widths and subtracts from the total line length, allowing for interword spaces. The line ending decision can be made automatically by the MCS, or by the operator, using the Line Length Remaining and the Justification messages. The status line also updates the depth of the page in picas and points, relating to the position of the cursor. The depth is calculated by the linespace and the number of line returns in the page, plus any additional leading commands. The character counter, on the right side of status line two, indicates the number of characters in each page including parameter commands. Other information displayed in status line two includes the left margin setting, the current line ending mode, the automatic quadding code, the current tab and the indicator for Insert mode. The portion of the screen below the status lines accomodates thirteen 64-character lines. When a line exceeds 64 characters, it continues on the next screen line. Right now all of these terms on the two status lines may seem confusing, but as you begin using the system they will become very familiar.

The MCS operator can clear the terminal screen at any time without affecting data stored on the disk. When the screen is cleared, the screen buffer memory is emptied of all contents. The cursor and the status lines remain. If the screen is completely blank (without status lines) and the power is on, a time out has occurred. When no keys are pressed for a period of five minutes, the screen is turned off automatically. Information in the screen memory remains and reappears when any blank key is pressed. This time-out feature prolongs the life of the terminal screen.

Controller



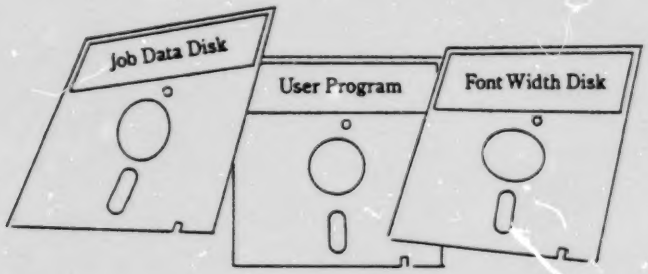
Located directly under the screen, the controller is the power pack or "brains" of the MCS 5. It holds all operating instructions for the keyboard, screen and disk drives and acts as a "traffic director", sending information to and from the different components. Because the MCS is software-based, an operating program must be established in the memory each time the system is turned on. The software remains in memory until the power is turned off. The operating program is on a mini-floppy disk called the user program disk (UPD) and designed specifically for the MCS 5.

There are only two buttons on the controller. The rocker arm, located on the right rear side, is a power switch that activates the front-end (the screen, keyboard and disk drive unit). The other is a Load Button used to install programs into the memory. To load a program, the operator inserts the program disk into the Disk Drive and presses the red Load Button on the controller. The information on the disk is copied into the memory, allowing the operator to remove the program disk and insert a different disk into the drive.

In addition to operating instructions, the controller memory also holds the character widths of up to 16 fonts. This width information is essential for justification on the MCS. The operator selects a set of fonts, loads the font widths into memory and composes copy on the screen. As copy is composed, the controller calculates the line endings and hyphenations using the width information in memory.

Disk Drive

The disk drive receives disks for programming the controller, job storage and job retrieval. On the MCS 5 the disk drive is located on the controller. There are 3 different types of disks which you will use in the disk drive:



1. The User Program Disk - This disk contains all of the necessary information for preparing (programming) the system for typesetting.
2. The Font Width Disk - This disk contains the widths of 16 type fonts. The system needs to know these widths to set your copy with consistent and accurate letter spacing.
3. The Job Data Disk - This is the disk on which you type your jobs.

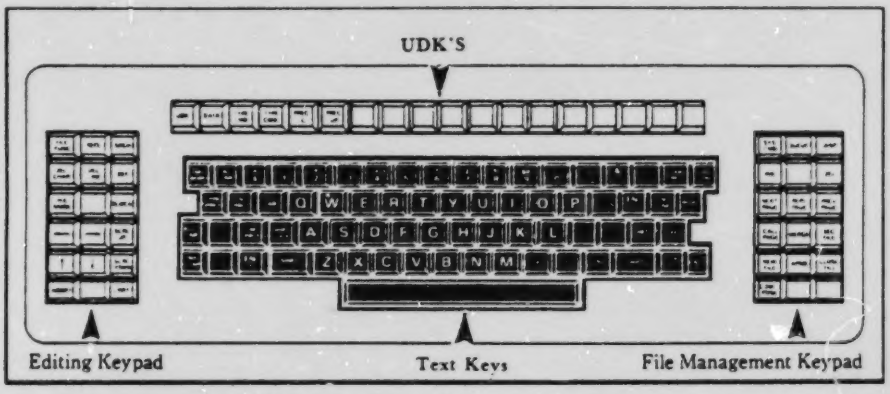
The User Program Disk and the Font Width Disk contain all necessary information - you don't add anything to them. You just put them into the disk drive and then by pressing a button, load their information into the memory of the system. Once their information is in the memory of the system you will insert your Job Data Disk and begin entering your job on this disk.

The single-sided, 5¼" job disk carries almost 160,000 characters. The information on the disk is stored in files of up to 99 separate pages. A page may contain 6,000 characters, which is the capacity of the screen memory. Approximately 128 unique file names may be entered on the disk, depending on the number of characters in each file. A listing of stored file names can be called at any time during input without interrupting the file in screen memory. The Abort key restores the screen information and replaces the cursor at the same location on the file.

INFORMATION SHEET NO. 1 - continued

Keyboard

The keyboard has 4 different sections with which you need to be familiar:



File Management- These keys are located on the right side of the keyboard. The File Management keypad governs the organization of files on the work disk and the sending of files to output devices. A file is started on the disk by pressing the **NEW FILE** key and entering a name. Thereafter, the file can be called to the screen using **CALL PAGE**. Other pages of the file can be called with the **NEXT PAGE** and **PREVIOUS PAGE** functions. The **INSERT** and **APPEND** keys are used to store copy on the disk either at the end of a file or in a designated page position of a file. The **MERGE** key is used to enter stored data into the open screen file from the disk. After file editing, pages can be replaced or deleted, and then the files are sent to the typesetter with the **QUEUE** key. The File Management keypad also contains a **DISPLAY** key, which is used to call various indexes. The **SYSTEM COMMAND** key accesses functions that affect the system, such as resetting the typesetting device, loading font widths and deleting files.

Editing Keypad- The left side of the keyboard is dedicated to editing functions. The Editing keypad is used for cursor movement. The cursor movement keys position the cursor anywhere on the screen. The operator has the option of inserting copy at the point of the cursor, or typing over the existing characters. The operator can delete single characters, entire screen lines or entire blocks of copy. Scrolling keys allow the operator to view the entire page on the screen.

Text Keys- The center portion of the keyboard is used for typing copy and entering typesetting codes. The quadding codes and line ending keys are located together on the right side of the text keypad, and the tabbing keys and fixed spaces are on the left. The MCS is equipped with a **CANCEL CHARACTER** key and a **CANCEL WORD** key, located on the first row of the text keypad.

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INFORMATION SHEET NO. 1 - continued

UDKs- The very top row of the keyboard contains twelve user-definable keys (UDKs), which are assigned to codes or type used repeatedly. In the operating program, these keys are defined to produce the commands for line length, font, point size and linespace plus various leading and line ending codes. Pressing one of these twelve keys produces the command sequence or text stored there. The key labelled UDK, combined with any letter or number key, is used in the same way to produce a programmed set of codes and or text, giving a total of 96 programmable keys. Once the UDKs are defined, the information is stored on the User Program Disk (this has been done by the instructor). When the User Program Disk is loaded, the UDKs automatically produce the stored information when hit. Thus, a series of keystrokes can be reduced to one or two.

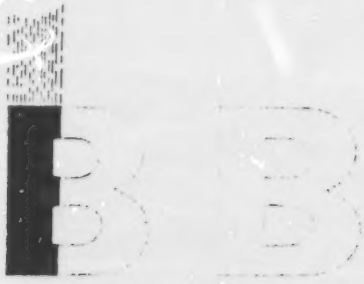
MCS 10

This system uses the same screen and keyboard as the MCS 5 but has a different controller which is located on the floor and is approximately twice the size of the MCS 5 controller. The disk drive unit, keyboard, and screen are all on-line to a photo unit. On-line means the photo unit communicates with the MCS 10 via a cable. The operator sends jobs directly to the photo unit instead of having to remove the disk from the disk drive and reload it into a separate disk drive in the photo unit.

ADDITIONAL COMPONENTS

8400

Phototypesetter- After you have entered your copy onto a job disk, it is printed by the Phototypesetter. The MCS 8400 is a CRT photo unit that uses digitized character information to create images on photographic paper. Each character of every font has a pattern of black and white areas which is reduced to a series of numbers and stored on an 8" floppy disk, called a Job Font Disk. Using this digitized information, a beam of light creates the character image on the photographic material. The fonts are stored by a number on a Job Font Disk in the 8400 and are called into use by User Font Identification Numbers entered at the keyboard of the 5 or 10.



Digitized Character Information

The 16 fonts can be changed by inserting a different font disk. The 8400 can print any combination of those faces in one job. It is possible to mix and match typestyles on a Job Font Disk to achieve any combination of fonts required in a typesetting job. The font disk remains in the disk drive of the phototypesetter while copy is being typeset.

INFORMATION SHEET NO. 1 - continued

The characters in each font can be set in sizes ranging from 5 to 72 point, in various widths. The 8400 is capable of electronically condensing or expanding the characters, from 5 to 72 points wide. It can slant characters to the left or right from 1 to 31 degrees. It should be noted that the 8400 is strictly a slave to the front-end, and any typestyle manipulation is achieved through commands entered at the keyboard. Fonts used in the 8400 must have corresponding width value files in the controller memory.

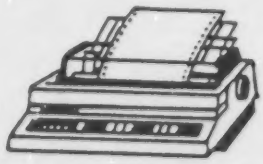
The 8400 accomodates up to a 12-inch take-up cassette, allowing a maximum line measure of 70-picas wide. The paper transport will allow paper widths of 2, 3, 4, 6, 8, 8½, 10 or 12 inches. The paper passes over the light beam and the characters are exposed. As it feeds through the paper transport, it slides into a take-up cassette on the right side of the 8400. The cassette is removed, and the photographic material is inserted in a processor that develops the character images.

Processor

The machine develops the photo-sensitive paper used in the phototypesetter. Output is camera ready typeset paper.

Printer

A Diablo daisy-wheel line printer is a valuable, low-cost tool for proofreading purposes. Copy can be proofed for typing errors, line endings and content, without being typeset. The Diablo Line Printer can be set up to print tabular copy in columns. The Line Printer is an excellent device for catching and eliminating spelling and grammatical errors.



Line Printer

This information sheet has presented you with a great deal of new information. As you begin using the system what you have read here will be better understood. For now, read this information sheet several times and then go on to Assignment Sheet No. 2.

ASSIGNMENT SHEET NO. 2

COMPETENCY 2: PREPARE MCS 5 AND MCS 10 SYSTEMS FOR DATA ENTRY.

ASSIGNMENT: Read Information Sheet No. 2 "How to bring up MCS 5 System" and Information Sheet No. 3 "How to bring up the MCS 10 System" and Information Sheet No. 4 "Functions of the Default Program" and follow the instructions to prepare both the Compugraphic 5 & 10 for data entry. If you have any questions or problems following these directions be sure to ask the instructor for clarification. Practice completing this sequence of steps until you can demonstrate your ability to bring up the MCS 5 and MCS 10 Systems in 15 minutes.

RESOURCES:

- Information Sheet No. 2 "How to bring up the MCS 5 System"
- Information Sheet No. 3 "How to bring up the MCS 10 System"
- Information Sheet No. 4 "Functions of the Default Program"
- Terminology Pages pages 26 & 27 of this Learning Guide
- Compugraphic Phototypesetting System
- MCS 5 UPD
- MCS 5 User Font Width Disk
- User font index guide
- Typeface reference guide
- MCS 10 UPD Volume I
- MCS 10 UPD Volume II
- MCS 10 User Font Width Disk
- 5¼" job disk (Must be formatted by instructor before it can be used.)

ASSIGNMENT SHEET NO. 2 - continued

EVALUATION: Demonstrate your ability to bring up MCS 5 and MCS 10 Systems so that at the top of the computer screen, the status line, looks like this:

```
Composition
Mode                                                          Ty No Dev
 s 8.0   s 8.0   7 10   \ 15.00   A  sXX  J  D 0.00            0000
```

You must be able to prepare the computer for data entry in this manner before proceeding to the next task.

INFORMATION SHEET NO. 2
HOW TO BRING UP THE MCS 5

Items A and B explain what occurs as you load the program for the MCS 5 and establish your type widths. Read them without actually performing the steps on the MCS 5. Following these 2 items are step by step directions for programming the MCS 5.

A. LOADING THE PROGRAM (UPD)

The power for the screen, keyboard and disk drives comes through the MCS controller. To turn the system on, the power button on the right side of the controller must be switched to the On position. The MCS controller not only does all the "thinking" for the system, but also acts as a "traffic director", sending information to and from the different components. In order to act intelligently, it must be programmed with the User Program Disk. This disk contains the brain power for the system. The controller takes the operating instructions from the disk into its memory. Throughout the day, it will use this information to perform its various functions. Whenever the MCS power is manually turned off, the program is forgotten. This program must be re-loaded into memory any time the MCS needs to be turned on.

To load the program, the User Promgram Disk Volume 1 is inserted into the disk drive. Pressing the Load button, on the front of the controller, causes the information on the disk to be read into the memory of the system. The screen will display the message "No Fonts" as soon as the entire User Program has been "loaded". Once the program is established in the memory, the disk can be removed and stored in a safe place.

B. ESTABLISHING A DRESS FILE (USER FONT WIDTH DISK)

The MCS controller is capable of deciding how many characters will fit on a line. In order to make the correct decision, the controller must "know" the width of every character of each typeface being used. These character width values are contained on an MCS User Font Width Disk. Each User Font Width Disk contains various combinations of typestyles. Each combination of styles is called a "font dress". The controller can remember width values of up to 16 typefaces at a time. We have 2 font dresses. Each font dress, containing up to 16 different fonts, has a font dress file name. The operator will use this file name to load the width values into the controller memory.

INFORMATION SHEET NO. 2 - continued

Loading the dress file is the second step in preparing the CRT to receive input. After the UPD program has been loaded into memory (item A), the User Font Width Disk is installed in the disk drive. At the keyboard, **SYSTEM COMMAND** is hit, followed by the letters D-R-E-S-S and the dress file name. The system will search the disk for that file and enter the width values of the fonts into the memory of the controller. The information will be used to achieve hyphenation and justification on the screen. After loading the dress file, the dress file can be removed. Whenever a different font (not on the Dress File that was initially loaded) is required, the operator must load the other dress file (which contains the desired font) into the memory.

DIRECTIONS: The operator should read through the following procedures and then perform each step at the MCS 5.

*** Do not turn machines on or off with a disk in the drive.***

1. Turn on the compugraphic with the rocker arm switch located on the back right side of the controller (when facing the screen). A red light will come on under the disk drive on the controller to indicate the machine is running (the light is within the grill on the left side). If it starts clicking and numbers appear on the screen, don't worry, it is just checking to see what it should do next. Continue with steps 2 and 3.

2. Remove the User Program Disk from the plastic storage file and place in the disk drive. The label should face up and the two small round notches should be toward the disk drive. Gently push the disk all the way into the slot. Latch the black flap on the disk drive by pressing it down.

3. Press the red Load button on the front of the controller. After about 20 seconds the disk drive will click several times and the red light will go on The message: **"Loading Volume 1"** will appear on the VDT.

INFORMATION SHEET NO. 2 - continued

4. Wait for the message Volume 1 is loading to disappear and a signal tone. The screen will light up and the message **No Fonts** will appear at the top right. Remove the Program Disk. Place it in it's protective pocket and put it back in the file holder.

RevD

No Fonts 0000

5. Remove the User Font Width Disk from the file holder, place it in the disk drive with the two small notches toward the back and the label up, and be sure to close the disk drive gate.

6. At the keyboard, press the **SYSTEM COMMAND** key, located at the top of the right-hand keypad.

7. Type the word DRESS then choose which of the 2 dress files you wish to use:
   1. **TriBasBemTyp** - the following are type families included on this file:
      Triumverate
      Baskerville
      Bembo
      Typo Roman
   2. **SouOmComsTim** - the following are the type families included on this file:
      Souvenir
      Omega
      Commercial Script
      Times

   For our first exercise we will need **TriBasBemTyp** loaded into the machine. Enter the dress file name exactly as it appears here **TriBasBemTyp**, with the first letter of the abbreviation of a type family name capitalized and no spaces between names.
   Press the **Execute** key (file management key pad). Wait for the message "Complete" in the second status line.

SYS:DRESS D:F1 Id:TriBasBemTyp Pg01 Ty No Dev

Complete 0000

INFORMATION SHEET NO. 2 - continued

8. Check the font index by pressing **DISP** (Display, located on right side of keypad), **FT** (the letters) , **EXECUTE**. Now you see a listing of the type fonts you can use. Use the **ABORT** key to clear the screen (left side of keypad).

9. Your font widths are now loaded into the controller's memory. Remove the User Font Width Disk. Return it to the file holder

10. Press the **COMPOSE** button on the file management key pad (right side).

11. Press the **EXECUTE** button on the file management key pad. Status field at the top of the computer screen should display:

Composition Mode

P_S 8.0 L_S 8.0 F_T 10 L_L 15.00 A T_BXX J D 0.00 LM 00.00 0000

12. The MCS 5 System is now ready to receive input (your job or copy).

Now, making sure there is no disk in the disk drive, turn off the system, and complete this process several times until you feel comfortable with it.

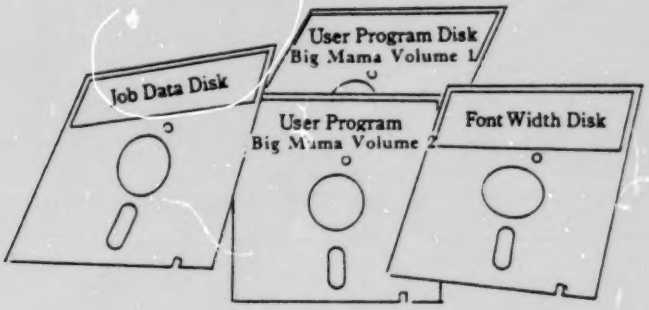
INFORMATION SHEET NO. 3

HOW TO BRING UP THE MCS 10 SYSTEM

DIRECTIONS: The operator should read through the following procedures and then perform each step at the MCS 10.

1. Turn on the compugraphic with the rocker arm switch on the front right side of the controller (as you face it) which is located on the floor.

2. Unlike the MCS 5 the 10 has 2 disk drives. Insert the **"MCS 10" UPD Volume I** (Also labeled "Big Mama " Vol. 1) into Disk Drive #1 (on the left). If it begins clicking don't worry - just continue with this step.



3. Press the white "dump" button on the front left side of the controller (when facing it) which is located on the floor. After 45 seconds the screen should say **"Loading Volume I".**

4. When the screen changes to **"Insert Vol. II and hit Execute"** remove UPD Vol I and return it to its protective sleeve in the file box and insert **"MCS 10 Vol. II"** UPD into disk drive #1. Then press the EXECUTE button on the file management key pad. The screen will say "Loading Volume II".

INFORMATION SHEET NO. 3 - continued

5. When the screen changes to the status field and beeps twice, open the gate and remove the UPD and return it to its protective sleeve in the disk file.
6. Place the **User Font Width Disk** in disk drive # 1 with the two small notches toward the back and the label up.

7. At the keyboard, press the **SYSTEM COMMAND** key, located at the top of the right-hand keypad.

8. Type the word DRESS then the name of the first dress file:
    1. **TriBasBemTyp** - the following are type families included on this file:
       Triumverate
       Baskerville
       Bembo
       Typo Roman
    2. **SouOmComsTim** - the following are the type families included on this file:
       Souvenir
       Omega
       Commercial Script
       Times

    Enter the dress file name exactly as it appears here **TriBasBemTyp** with the first letter of the abbreviation of a type family name capitalized and no spaces between names.

    Press the **EXECUTE** key (right side of keypad). Wait for the message "Complete" in the second status line.

INFORMATION SHEET NO. 3 - continued

9. Check the font index by pressing **DISP** (right hand side of keypad) , **FT** (the letters), **EXECUTE**. These are the fonts you can use. Hit the **ABORT** key to clear the screen (left hand side of keypad). Your font widths for the first dress file are now loaded.

10. Unlike the MCS 5, the MCS 10 can hold 2 dress files, so enter the second dress file (SouOmComsTim) repeating steps 7-8. This process is complete when the screen says **"Complete"**. To check the newly added font index you will need to use the **SCROLL UP** key (left side of keypad) to view the additional fonts, as the screen cannot fully display both at once. Then hit **ABORT** to clear the index. Remove the User Font Width Disk.

SYS:DRESS	D:F1	Id:SouOmComsTim	Pg 01
		Complete	0000

11. Press the **COMPOSE** button on the file management key pad.

12. Press the **EXECUTE** button on the file management key pad. The status field at the top of the screen should now display:

Composition Mode

P_S=8.0	L_S=8.0	F_T=10	L_L=45.00	A	T_BXX	J	D=0.00	LM=00.00	0000

You should be able to arrive at this screen display 15 minutes after turning on the machine.

13. The MCS 10 System is now ready to receive input (your job or copy).
As you know by now, the procedure for programming the MCS 10 is very similar to programming the MCS 5. You should understand the differences between them.
Remove any disks, turn off the controller and repeat the programming of the MCS 10 several times until you feel comfortable with the process.

QUIZ

DIRECTIONS: The operator should answer the following questions pertaining to the preparation of the MCS. When finished, the operator should compare his/her responses with those provided on the following page.

1. The MCS controller is not capable of operating the system unless its "brains" are inserted. The brains are contained on a _____ _____ disk and must be re-loaded each time _____.

2. Once the program is in the controller memory, the screen will light up. The message _____ _____ indicates that the controller is ready.

3. Place the following power-up procedures in proper order:

Load the User Program Disk	Press Power button to On.
(Followed by volume 2, for	Press the Load button.
MCS 10)	Remove the User Program disk.
Wait for the No Fonts message	

4. The Dress File must be loaded into the controller memory from a _____ disk. This file contains _____ _____ for every character in every typeface in the font dress.

5. To load the font dress, the System Command key is pressed, followed by: _____, _____ _____, Execute.

6. After the fonts have been loaded into memory, a listing can be called to the screen by pressing _____, _____, Execute.

7. Why does the controller require character width information?

8. The controller for the MCS 5 can remember width values for as many as _____ different typestyles. The controller for the MCS 10 can remember width values for as many as _____ different typestyles. Typestyles are grouped together in files called _____ _____.

QUIZ - continued

9. The start-up procedures outlined in this section are listed below. Supply the missing information.
   a. Power on. Load the User Program Disk. Press _____ on the controller front panel.
   b. Wait for the signal tone, which is accompanied by the screen message _____.
   c. Remove the Program Disk and insert the _____ _____ _____ Disk.
   d. Press _____ _____ and type _____. Enter the font dress name followed by the _____ key.
   e. Check to see that the right font widths are loaded by pressing _____, _____. Execute. Clear the screen with the _____ key.
   f. The MCS is now ready to _____ _____.

ANSWERS TO QUIZ

1. The MCS controller is not capable of operating the system unless its "brains are inserted. The brains are contained on a User Program Disk and must be re-loaded each time the machine is turned on.

2. Once the program is in the controller memory, the screen will light up. The message No Fonts indicates that the controller is ready.

3. Place the following power-up procedures in proper order.
   2. Load the User Program Disk (followed by Volume 2 for MCS 10)
   4. Wait for the Not Fonts message
   1. Press the power button to on
   3. Press Load
   5. Remove the User Program Disk

4. The dress File must be loaded into the controller memory from a User Font Width Disk. This file contains width values for every character in every typeface in the font dress.

5. To load the font dress, the System Command key is pressed, followed by:
   D-R-E-S-S, File Name, Execute.

6. After the fonts have been loaded into memory, a listing can be called to the screen by pressing Disp, FT, Execute.

7. Why does the controller require width information: It uses the information to make line ending decisions.

8. The controller for an MCS 5 can remember width values for as many as 16 different typestyles. The controller for an MCS 10 can remember width values for as many as 32 different typestyles. Typestyles are grouped together in files called dress files.

ANSWERS TO QUIZ - continued

9. The start up procedures outlined in this section are listed below. Supply the missing information.
   a. Power on. Load the User Program Disk. Press Load on the controller front panel.
   b. Wait for the signal tone, which is accompanied by the screen message No Fonts.
   c. Remove the Program Disk and insert the User Font Width Disk.
   d. Press System Command and type D-R-E-S-S. Enter the font dress name followed by the Execute key.
   e. Check to see that the right font widths are loaded by pressing Display, FT, Execute. Clear the screen with the Abort key.
   f. The MCS is now ready to input data.

Do not proceed until you correct and understand any errors you made on this quiz.

INFORMATION SHEET NO. 4

FUNCTIONS OF THE DEFAULT PROGRAM

The MCS 5 and 10 are preprogrammed with parameters (instructions) that it will "default" to if no other parameters are entered. Those parameters are: point size, line space, font, line length, and line ending. Because the MCS must have values for each of these in order to set type it will supply them if you don't provide any. In the dress file **TriBasBemTyp** the default parameters are:

- Point size 8
- Line space 8
- * Font 10
- Line length 15
- Justified copy

in the dress file **SouOmComsTim**, the default parameters are:

- Point size 8
- Line space 8
- * Font 40
- Line length 15
- Justified copy

*Note that the difference between them is the font.

If you do not enter your own parameters for point size, line space, font number, line length, and line ending the machine will automatically set your job with the above parameters of the dress file you loaded (for the MCS 10, when you load both dress files, the default parameters will be for the first dress file you loaded). The parameters will appear on the second line of the status field after you have prepared the system for data entry and hit COMPOSE, EXECUTE. The status line will look like this:

Composition Mode **Ty No Dev**

P_S=8.0 L_S=8.0 F_T=10 L_L=15.00 A T_SXX J D=0.00 0000

The parameters are the first four items: Point size = 8, line space = 8 font 10 and line length 15. 99% of the time you will need to change these default parameters as your job will require a different type size, line length, etc. You can override the parameters by entering new parameters. This procedure will be explained in Task 2.

TERMINOLOGY

DIRECTIONS: Study these terms. They are important to your understanding of the system.

MCS - Modular Composition System

FLOPPY DISK - A thin circular piece of film in a protective plastic cover used to store data entered into a computer.

STUDENT JOB DISK - a floppy disk for your own use to store course work and typesetting jobs.

UPD - User Programmed Disk or systems disk containing all the necessary information to instruct the computer to store, recall and typeset keyboarded data. The UPD is used to prepare the computer for data entry.

USER FONT WIDTH DISK - contains all available typefaces and the character width information for each typeface.

DISK FILE - storage BOX used to protect floppy disks when not being used in the computer.

DISK DRIVE - slot in controller where you insert disk so it can be used.

DUMP - to load information off the UPD into buffer memory.

FILE - contains up to 99 separate pages of information with up to 6,000 characters per page stored on a 5¼" floppy disk. Approximately 128 files can be entered on the disk depending on the number of characters per file.

FORMATTING - preparation of blank disks to be compatible with compugraphic system.

MCS 5 - 128K memory computer typesetting workstation. If cable connected to the typesetter the MCS 5 can also output data to the typesetter.

TERMINOLOGY - continued

MCS 10 - 512K memory computer typesetting workstation with output to proof printer, photo typesetter and modem (when connected).

CRT - Cathode Ray Tube used to light computer, video or TV screens.

VDT - Video Display Terminal

BUFFER - CRT screen displaying up to 15 lines at a time.

STATUS FIELD - The top 2 lines on the buffer screen that supply the operator with information on parameters, file names, error messages and output devices.

PARAMETER - guidelines which indicate the type size, line length, line spacing and font.

DEFAULT PARAMETERS- automatic pre-programmed parameters used by the Compugraphic unless specific changes are entered.

EDIT - make necessary changes in wording, punctuation or placement of text.

NEW FILE - A file entered for the first time on a disk.

EXISTING FILE - A file previously entered on the disk. You can only call an existing file from the disk.

STUDENT EVALUATION

We need your help in the design and revision of these Competency-Based Learning Packages. Please answer the following questions, take out this page and give it to your Instructor (without your name, if you prefer).

Instructor:_____

Rate the following on a scale of 1 to 10 by circling the appropriate response.

1. Were the assignments clearly stated?

I was totally confused about what I was supposed to do				**I could usually figure out what to do**			**I understood exactly what I should do**		
1	2	3	4	5	6	7	8	9	10

Was there an assignment that seemed particularly unclear and confusing? If so, which one(s)?_____How would you improve it (them)?

2. Were the evaluation criteria clear?

I didn't understand how my work was going to be graded at all				**I understood about half of the evaluation criteria**			**I understood everything I was going to be graded on.**		
1	2	3	4	5	6	7	8	9	10

Was there an evaluation statement or Checklist statement that was especially unclear or confusing? If so, which one(s)?

_____

3. Were there any graphics (i.e., pictures, diagrams, drawings, etc.) which you found particularly unclear or confusing? If so, which one(s) and why?

4. Could this Learning Package be improved? How? Write on the back of this sheet if you need more room.

Task 2
Creating a New File and Editing a File

INTRODUCTION

TASK 2: CREATING A NEW FILE AND EDITING A FILE

PURPOSE: A "new" file on your job disk must be created whenever information is keyboarded into the computer for the first time, so that it can be stored and retrieved for future use or further correction.

PERFORMANCE OBJECTIVES: Upon completion of this learning guide you will be able to enter new parameters, type in copy, edit the copy, store the copy and run off a proof print to check for errors.

COMPETENCIES:

1. CREATE A NEW FILE, ENTER NEW PARAMETERS AND RUN A PROOF COPY
2. EDIT NEW FILE DATA AND RUN A PROOF COPY

ESTIMATED COMPLETION TIME: 1½ hours

ASSIGNMENT SHEET NO. 1

COMPETENCY 1: CREATE A NEW FILE AND RUN A PROOF COPY

ASSIGNMENT: Read Information Sheet No. 1 "How to create a new file and Information Sheet No. 2 "Proof Printer Operation". Then, using your job disk (formatted by the instructor) create a new file and enter the copy provided (example 1). Store the file and run off a proof copy on the proof printer (not the typesetter). Ask the instructor any questions you may have related to the completion of this assignment.

RESOURCES:

- Information Sheet No. 1 "How to create a new file"
- Worksheet No. 1
- Example 1
- Information Sheet No. 2 "Proof Printer Operation"
- Compugraphic typesetting system
- Instructor

EVALUATION: Compare your proof copy to the one on page 15. It should be identical before you go on to the next assignment.

INFORMATION SHEET NO. 1
ENTERING A NEW FILE ON JOB DISK

Directions: Using the procedures outlined below, you will start (open) a new file on your job disk, enter typesetting parameters, input the copy provided and store the work on a Job Data Disk. Read through this information sheet once. Then practice each step on the MCS. Following this Information Sheet is a worksheet with a specific assignment for you to enter, using these steps.

OPENING THE FILE

Producing type on the MCS involves entering copy from a keyboard onto a video display screen, storing the copy in a file on a magnetic floppy disk, and sending the file to a typesetter.

1. First, obtain a job data disk. These are 5¼" floppy disks and are sold in the bookstore for about $3.25. You will use this disk throughout the course so put your name on the label. The disk must be formatted before it can be used -check with the instructor to get it formatted.

2. If the 5 or 10 is not already on, bring up the 5 or 10 system according to directions in Task 1. If the system is already on but the screen is blank, pressing any blank key will light the screen. Once the System is up, press the COMPOSE button then the EXECUTE button on the file management key pad to prepare the computer to start a new file. This puts you in the composition mode.

3. Place your student disk in disk drive 1.

4. You are now ready to assign a name to the file being typed. The file name, consisting of up to 12 alphanumeric characters, is used to store and recall data from the file to the screen and to direct the file to the typesetter or other output device. The disk can accept up to 128 different files. To keep track of your jobs, you need to assign each file that you use, a name.

INFORMATION SHEET NO. 1 - continued

To place the file name on the Job Data Disk, first the NEW FILE key is pressed. The top status line of the screen will show a "D" to indicate the active disk drive, f1 or f2 (on the MCS 5 you only have 1 disk drive so it will always display F1. On the MCS 10 you have 2 disk drives). The status line also displays "FN", (which stands for file name) followed by a cursor. Type the file name you have chosen (if you are doing this for the first time for practice, use your own name for the file name. For the assignment in Worksheet No. 1, use the name, Controller). As the file name is typed, it will be entered at the point of the cursor. Remember, it can only be 12 characters in length.

After typing the file name, the EXECUTE key is pressed. The words "new file" will appear on the second status line. This procedure opens a "primary" file, defined as the file which is active on the screen. The "PG" on the top status line refers to the page number within this file, which automatically shows 01 at the beginning of a new file.

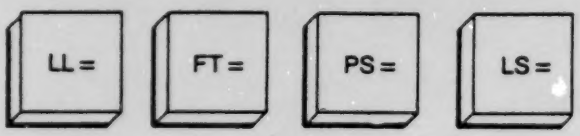
Strike COMPOSE and EXECUTE to put the system in the Composition Mode. The Composition Mode is used for entering data. When you are in the Composition Mode the status line is displaying current parameters, indicating remaining line length and breaking lines according to the entered line length. The words COMPOSITION MODE will appear on the lst status line when you strike COMPOSE (and disappear when you strike EXECUTE). The second status line informs the operator of the current point size, linespace, font and line length. Right now it is displaying the system's default parameters. If you do not enter typesetting commands in the file, the type would be set according to these (see Information Sheet No. 4, task 1).

A typical command looks like this: < PS40 > . This is the command for a point size of 40. The open bracket (<) is followed by a two-letter code (PS) which stands for the typesetting command (Point Size). The 2 letter code is followed by the desired value for that command. In our example 40 is the point size value. This numerical value is then followed by a closing bracket (>). MCS codes are easy to remember. Point size, for example, is represented by the letters "PS", line length by "LL", line spacing by "LS" and font by "FT".

INFORMATION SHEET NO. 1 - continued

There are two ways to enter these typesetting commands. The first method involves the use of the **TYPE COMMAND ON** and **TYPE COMMAND OFF** keys, located on the top row of the keyboard. First hit the **TYPE CMO** key (this produces a bracket). Typesetting commands are separated from text by the command brackets. Now type **P** and **S**, then the numerical value of the point size (40 in our example) and end the command by hitting **TYPE CMX** to produce the closing bracket. As you struck **TYPE CMX** the original default parameter on the 2nd status line changed from 8 points to 40 points. You have now entered the point size of 40. The command sequence as you will type it will always appear on the screen in half intensity, to distinguish it from the actual copy you type.

The second method **(and easiest)** for entering commands results in exactly the same screen symbols, but to make operation of the MCS simpler, the most common typesetting commands have been stored under dedicated keys called UDKs, or user-definable keys. The four basic typesetting parameters (line length, font, point size, linespace) are given the last four keys on the top line of the keyboard.



Each key supplies the necessary command brackets and the two-letter code. All the operator does is fill in the numerical value and then press the cursor right key to close the command. To begin, press the **PS** key on the top row of keys. The screen now displays the bracket and the letters PS. It also displays **Arg?** on the second status line. This stands for "argument" -which is the screen's way of saying "what value do you want for point size?".

Now type the value - let's use 15. After entering 15, strike the cursor right key (→). The closing bracket appears and **Arg?** disappears. If you are entering a series of commands (all four parameters), the closing bracket can be omitted between codes, but must be entered at the end. The values for each of these commands are entered as follows:

INFORMATION SHHET NO. 1 - continued

LINE LENGTH: To change the line length, press the fourth key from the right, marked LL=. Line length is expressed in picas and points, separated by a period. The maximum line length allowed on the MCS is 45 picas. There is no need to add zeros before or after the pica value. 45 picas is expressed LL=45. An eight pica line length is expressed LL=8. Ten and a half picas is expressed: 10.6. Enter a LL of 20 picas. Don't add a closing bracket - go on to the next parameter.

FONT: Start the font command by pressing the third key from the right, labeled FT= and enter a font I.D. number. The fonts are identified by numbers from 1 to 9999. On page 10 is a list of the font I.D. numbers. Select the font number of the type style you want to use. Let's enter the number for Baskerville II: 20.

POINT SIZE: To change the point size, press the second key from the right and enter any value from 4 to 72. Half point sizes are entered by typing a .5 after the point size value. It is not necessary to include zeros before the point size value. 8-point type is entered PS=8; 70 point type would be entered: PS=70; and 10½ point type: PS=10.5. Enter PS=10.

LINESPACE: The linespace key is the last key on the right. Linespace is expressed in points and quarter points. Remember that the linespace setting refers to the space between the current line and the next line (baseline to baseline). Eleven and one half points of linespacing would be expressed: LS=11.2. Enter a value of 12.

INFORMATION SHEET NO. 1 - continued

After the linespace command, the command string may be ended by striking the cursor right key. When the dedicated keys are programmed, spaces are counted for the maximum number of numerals possible in that command. When entering values, if all possible spaces are used, the close command symbol will appear automatically. If the value falls short of the maximum number of spaces, hit the cursor right key (–) which skips over the remaining spaces, closing the command.* When the four basic parameters are set up, the second status line should look like this:

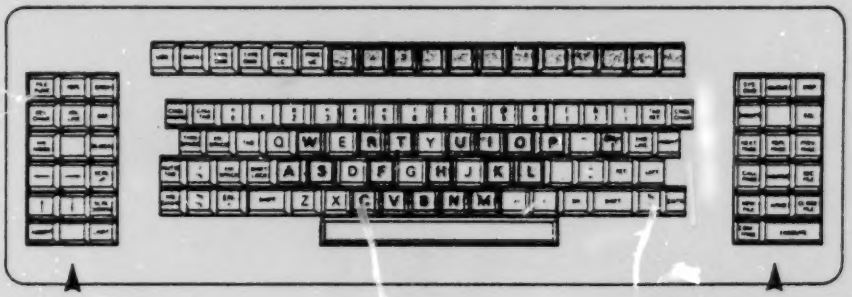
P_S=10.0 L_S=12.0 F_T=20 L_L=20.00 A T_BXX J D=0.00 0000

You have now changed the parameters from the default parameters to those of this exercise.

*In certain cases, if the command sequence is interrupted with a cancel character or deletion, the right cursor key does not produce the "command off" symbol. In that case, the TYPE CMX key in the top row of the keyboard must be used to close a command. EXECUTE may also be used to close a command.

INFORMATION SHEET NO. 1 - continued

After the type parameters are established for the job, copy is entered from the keyboard (for your first for time practice, just type a few sentences - anything. For the Worksheet No. 1 assignment, type the copy given on page 12.) The MCS keyboard is similar on design to the IBM Selectric typewriter. As characters are typed, the cursor will move along the screen line. Mistakes can be corrected by using the CANCEL CHARACTER key on the top right side of the keyboard, or the CANCEL WORD key on the top left. Scroll the cursor to the word or letter you want corrected with the appropriate cursor arrows on the editing keypad (left, right, up and down). Later you will be shown in detail how to make corrections. For this assignment you can leave your errors in.



MCS Keyboard

CLOSING THE FILE: When copy for the job has been entered, along with the appropriate typesetting commands, the file should be entered on the disk. With command sequence: **NEW FILE**/file name/**EXECUTE**, you opened the primary file and reserved the file name on the disk. As copy is typed, it is entered into a screen buffer memory. To store this page of copy on the disk, it must be "appended" or added to, the open file. Move the cursor to the end of your typed copy on the screen.The key sequence **APPEND/EXECUTE**, will enter the information in screen memory onto the disk. Your information will disappear from the screen as it is entered onto the disk. Notice that "Append Page" appears on the 1st status line.

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INFORMATION SHEET NO. 1 - continued

Since the file is still open, another page of copy may be entered into screen memory and then appended to the open file in the same way. When all copy for the file has been entered, the file must be closed by pressing **CLOSE FILE**, then **EXECUTE**. When the file is closed, it is permanently stored and can be called back for editing, sent to the typesetter, or saved for future additions. To make sure the file is stored, press **DISP, DI, EXECUTE**. A listing of files on the disk will be displayed in alphabetical order by file name. Numerically named files will appear first, followed by upper case file names and finally the lower case file names. Striking the **SCROLL UP** key displays the last part of the listing (page by page). This listing of files on a disk is referred to as an index. To clear the screen of this index, press **ABORT** (during typing this index can also be viewed at any time without interrupting your work in progress. The ABORT key will restore your work to the screen, placing the cursor exactly where it was when the index was called).

If you had closed your file, viewed your index of file titles, and hit ABORT - The screen will display:

	TY No DEV
Local Compose Mode Only	**0000**

Here in summary are the 6 steps to:

ENTER AND STORE A FILE

1. Press **New File.** If you are using the MCS 10 and if disk is not in Drive 1, press the cursor left key and enter the correct drive number F1 or F2. Type a file name, **Execute.**
2. Strike COMPOSE and EXECUTE
3. Enter typesetting parameters using the top row of dedicated keys (UDKs).
4. Type job copy.
5. Press **Appnd, Execute** to enter copy in the file.
6. Press **Close File, Execute** to close the file.

You now should have a practice file entered under your own name with a few sentences on it. If not, do so, then go on to Worksheet No. 1.

INFORMATION SHEET NO. 1 - continued

FONT INDEX

FONT NUMBER	FONT NAME	ARRANGEMENT
	DRESS FILE: TriBasBemTyp	
10	Triumvirate	500
12	Triumvirate BD	500
20	Baskerville II	500
21	*Baskerville IT II*	*501*
22	Baskerville BD II	500
23	*Baskerville BD IT II*	*501*
30	BEMBO REGULAR	500
31	*Bembo IT*	*501*
32	Bembo BD	500
50	Type Romeo	500
	DRESS FILE: SouOmComsTim	
40	Souvenir MD	500
41	*Souvenir MD IT*	*501*
42	**Souvenir BD**	**500**
43	***Souvenir BD IT***	***501***
60	Omega	501
61	Omega MD	500
70	*Commercial Script*	*501*
80	Times	500
81	*Times IT*	*501*
82	Times BD	500
83	*Times BD IT*	*501*

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WORKSHEET NO. 1

You will now open a new file, enter parameters and data and then store the file.

1. Follow the steps to open a file.

2. Use the file name "Controller" for this job (file names can be no longer than 12 letters)

3. For copy to enter, use the copy on Example 1 (next page). Type exactly as it is -errors included, later you will correct them. Do not use carriage returns, the MCS will justify all lines. While typing, only one space band is allowed after punctuation or any other place in the text. If you do enter 2 space bands the MCS will beep twice and display Double Bands in the error space on the status line. If this happens, cursor to your left and cancel one space with the CNCL CHAR key.

4. Make sure you press LEFT and RETURN after you type the last line.

5. Complete the necessary steps to close out your file.

6. After you have closed your file go on to the next assignment.

EXAMPLE 1

DIRECTIONS: Enter PS 10, LL 20, FT 20, LS 12 for this job. After entering these parameters strike the ENDLINE key to move the curser to the next line to begin typing.

Controller: The controller is the power or brains of the MCS 5. The MCS 5 controller not only does all the thinking for the system, but also acts as a traffic director, sending information to and from the different components. In order to function properly it must be programmed with the User Program Disk (UPD) designed specifically for the MCS 5. The disk drive is also housed in the controller.

(Be sure to hit LEFT and RETURN after the last line on this example.) Close out your file.

INFORMATION SHEET NO. 2
PROOF PRINTER OPERATION

DIRECTIONS: After entering example 1 onto a file, follow these steps and print a copy of your file for proofing.

1. The Proof Printer (Diablo 630) must be turned on with the red rocker arm switch on the back right side of the printer . A red power indicator on the front of the printer should light up.

2. Press the **RESET** button on the printer control panel - a beep will sound.

3. Adjust the page of the Proof Printer with the adjustment knob (press the knob in while turning) until the perforation between pages falls slightly below the pressure bar rollers. This is done so that the first line of type will start in proper relation to the top of the page.

4. If you have been working on the MCS 5 you will need to move to the MCS 10 to activate the Proof Printer. Since the MCS 10 has 2 disk drives it is possible to activate the Proof Printer from the second drive while someone is using disk drive 1. The MCS 10 system will need to be brought up if it is not in use.

5. With your student disk in either disk drive, press the **SYS CMD** (systems command) button on the file management key pad and type in **RESPR** (Reset printer) and then press **EXECUTE**.

INFORMATION SHEET NO. 2 - continued

6. Listen for a carriage return on the printer. This means the printer is reset. If you don't hear this, repeat step 4.

7. The left corner of the first line of the status field of the MCS 10 screen should display RESET:PR.

8. Press SYS CMD (systems command) then type PMEN (Printer Menu). Press EXECUTE. The information given should look like this

Lines per page	66	Tabs:	1. 000	11.000
Left Margin	005		2. 000	12.000
Right Margin	075		3. 000	13.000
Top Margin	06		4. 000	14.000
Lower Margin	60		5. 000	15.000
Pitch	10		6. 000	16.000
Line spacing	1		7. 000	17.000
			8. 000	18.000
			9. 000	19.000
			19.000	20.000

These parameters can be changed to vary the output, but for our use just leave them.

9. Press the FILE FUNC (file function) key on the editing keypad. Type EXIT and then press EXECUTE to load menu into printer memory.

10. Press the QUEUE button on the file management key pad and type PR (printer).

11. The cursor will then prompt you to supply the file name. Type in the name of your new file: Controller. The screen should now display:

Queue:PR Mode:F D:F1 Fn:Controller
0000

INFORMATION SHEET NO. 2 - continued

12. Press **EXECUTE** to complete this command and activate the proof printer. The Printer will take a few moments to read the data from your disk before proceeding to type. If you receive a NO DISK error in the right status field, check to see if your disk is in the corresponding drive number, DF1 or DF2. If not, repeat steps 10 and 11, then cursor back to the Drive number and type over the correct one. Proceed with Step 12 again. If you receive a NO FILE error in the right status field, check the spelling of your file name. You have to type it exactly as it was entered - if the first letter was a capital, then when you type it for printing it needs to have the first letter as a capital.

13. When the printer is finished typing, advance the paper by pressing **FORM FEED** on the printer control panel. This will allow the perforations to clear the feeding rollers. Tear off paper at perforations and examine the proof copy for mistakes. Compare your copy to the one below. Your disk may be removed and replaced in its protective sleeve if you need to leave the machine on, unless otherwise instructed. Save your printed copy for the next assignment.

```
 PS10 LL20 FT20 LS12 EL
Controller: The controller is the power or brains of theRt
MCS 5. The MCS 5 controller not only does all the think-Rt
ing for the system, but also acts as a traffic director, sen-Rt
ding information to and from the different components.Rt
In order to function properly it must be programmed withRt
the User Program Disk[UPD] designed specifically for theRt
MCS 5. The disk drive is also housed in the controller.QLRT
```

ASSIGNMENT SHEET NO. 2

COMPETENCY 2: EDIT NEW FILE DATA AND RUN A PROOF COPY

ASSIGNMENT: Read Information Sheet No. 3 ": How to edit typed Copy" and make editing changes in the file you created for the last assignment. Practice editing until you are thoroughly familiar with the editing procedure.

RESOURCES:

- Information Sheet No. 3 "How to edit typed copy"
- Worksheet No. 2
- Compugraphic typesetter
- New file on student disk
- Instruc[illegible]

EVALUATION: Submit your edited copy to the instructor for approval or correction. Be sure to ask the instructor any questions you may have regarding the completion of this assignment.

INFORMATION SHEET NO. 3

HOW TO EDIT TYPED COPY

DIRECTIONS: The following steps explain how to edit copy which you have stored on a disk. Read through them once and then practice.

1. Bring up MCS 5 or 10 system, put your disk in the drive and close the gate. Access your new file by pressing **CALL PAGE**, type the file name you want to use and press **EXECUTE** (you created a practice file with your name in the last assignment, use it to practice editing).

2. As you make corrections you may find yourself in EDIT MODE. This is distinct from the COMPOSITION MODE, which you used to initially entering your data. You automatically enter EDIT MODE whenever you move the curser up 2 or more lines. In EDIT MODE the status line will not display parameters or make line endings based on current parameters.

3. Let's go into EDIT MODE. Move cursor down 3 lines by pressing the button with an **ARROW POINTING DOWN.**

4. Press **UP ARROW** located on the editing key pad which will move the cursor up one space. Press this button again and the computer will beep twice and the screen will display a message in the status line that says **Edit Mode.** The computer will automatically go into edit mode every time you move the cursor up 2 or more lines.

5. Since you don't need to be in EDIT MODE to make changes, let's go from EDIT MODE back to COMPOSITION MODE: press **COMPOSE, EXECUTE.**
   Throughout your editing you will find yourself in EDIT MODE at times. Stay in Edit Mode until you are at the place where you want to make a correction, then return to COMPOSITION MODE; press **COMPOSE, EXECUTE** and make your correction.

INFORMATION SHEET NO. 3 - continued

6. Now let's practice some editing features. To move the cursor to a typo you would like to edit, press the UP ARROW, DOWN ARROW, RIGHT ARROW or LEFT ARROW buttons on the editing key pad, to move the cursor up a space, down a space, to the right one space or to the left one space respectively. Holding the buttons down will move the cursor until the button is released.

7. If there is an extra letter in a word that needs to be deleted, there are 2 methods you might use to do this. First, you could place the cursor on top of the letter you want removed and press DEL CHAR (delete character) on your editing key pad. This deletes the character the cursor is on. Another method is to move the cursor to one character past (to the right of) the letter to be removed and press the CNCL CHAR (cancel character) in the top right row of the text keys. This will delete the character to the left of the cursor.

8. To delete a word of typed copy, move the cursor just past (to the right of) the word to be removed and press CNCL WORD (cancel word) located on the top left of the text keys.

9. To delete a line of typed copy, move the cursor to the beginning of the line and press the DEL LINE on the editing key pad once. The line to be removed will appear underlined on the screen, make sure this is the line you want removed, if so, press DEL LINE again to delete. If you find you have underlined the wrong line after pressing DEL LINE once , press the ABORT button on the editing key pad. This will cancel the delete command.

10. If you want to insert information into the typed copy you will need to use INSERT MODE. In the status line at the top of your screen you should see a character count on the far right. Just to the left of the character count is the space that will indicate whether you are in Insert Mode. On the editing key pad there is a key marked INS MODE. It is an on-off button (press once for on and again for off). When you press this button an "I" should be displayed in the status line indicating the computer is in the insert mode. If the "I" does not appear press the INS MODE button again.

INFORMATION SHEET NO. 3 - continued

11. To insert a letter move the cursor just past (to the right of) the space where you'd like to insert the character. Check to see if you are in INSERT MODE then type in the character you want to insert.

12. To insert a word, move the cursor just past (to the right of) the space where you'd like to insert the word and type in the word.

13. To insert a line, move the cursor just past (to the right of) the space where you'd like to insert the line and type in the line.

14. When you have corrected the copy, you need to replace the old copy on your disk with the edited version. Press LIMIT, SCROLL UP & REPLACE PAGE buttons on the file management key pad. Then pre[illegible]XECUTE, CLOSE FILE, & EXECUTE buttons also on file management key pad. T[illegible]reen will go blank as the new information is written on the disk.

WORKSHEET NO. 2

DIRECTIONS: Use Information Sheet No. 3 to edit your file titled: Controller. Correct any errors you may have made and make the following indicated corrections.

PS10 ~~LL20~~ LL15 FT20 LS12 EL
Controller: The controller is the power or "brains" of theRt
MCS 5. The MCS 5 controller not only does all the think-Rt
ing for the system, but also acts as a traffic director, sen-Rt
ding information to and from the different components.Rt
In order to function properly it must be programmed withRt
the User Program Disk[UPD] designed specifically for theRt
MCS 5. ~~The disk drive is also housed in the controller.~~ QLRT

After making the above corrections, close your file and print it on the Proof Printer. Compare it with the example on the next page.

BEST COPY AVAILABLE

WORKSHEET NO. 2 - continued

Your newly edited job should look like this:

```
 PS10  LL15 FT20 LS12 EL
Controller: The controller is the power orRt
''brains'' of the MCS 5. The MCS 5 con-Rt
troller not only does all the thinking for theRt
system, but also acts as a traffic director,Rt
sending information to and from the dif-Rt
ferent components. In order to function pro-Rt
perly it must be programmed with the UserRt
Program Disk[UPD] designed specificallyRt
for the MCS 5.QLRT
```

If it does, go on to the next assignment. If it does not, go back and make the necessary changes.

STUDENT EVALUATION

We need your help in the design and revision of these Competency-Based Learning Packages. Please answer the following questions, take out this page and give it to your Instructor (without your name, if you prefer).

Instructor:_____

Rate the following on a scale of 1 to 10 by circling the appropriate response.

1. Were the assignments clearly stated?

I was totally confused about what I was supposed to do				**I could usually figure out what to do**			**I understood exactly what I should do**		
1	2	3	4	5	6	7	8	9	10

Was there an assignment that seemed particularly unclear and confusing? If so, which one(s)?_____How would you improve it (them)?

2. Were the evaluation criteria clear?

I didn't understand how my work was going to be graded at all				**I understood about half of the evaluation criteria**			**I understood everything I was going to be graded on.**		
1	2	3	4	5	6	7	8	9	10

Was there an evaluation statement or Checklist statement that was especially unclear or confusing? If so, which one(s)?

_____

3. Were there any graphics (i.e., pictures, diagrams, drawings, etc.) which you found particularly unclear or confusing? If so, which one(s) and why?

4. Could this Learning Package be improved? How? Write on the back of this sheet if you need more room.

Task 3
Operate the Phototypesetter and Processor

INTRODUCTION

TASK 3: OPERATE PHOTOTYPESETTER AND PROCESSOR.

PURPOSE: It is necessary to operate the typesetter and processor to obtain typeset, camera-ready copy. Any mistakes in operation can be costly errors. The silver based paper used for typesetting costs $1.00 per foot. If the cassette is incorrectly loaded, you will waste 6 feet of paper; if the processor is used incorrectly, it can cost $40.00, so, it pays to be alert!

PERFORMANCE OBJECTIVE: Upon completion of this learning guide you will be able to turn on, program, load and replace the take-up cassette correctly and operate the photo typesetter. You will also be able to turn on, flush and prepare the processor for operation and be able to clean and dissassemble it for the end of the working day and for over the weekends.

COMPETENCIES:

1. OPERATE PHOTOTYPESETTER
2. OPERATE PHOTO PROCESSOR

ESTIMATED COMPLETION TIME:

ASSIGNMENT SHEET 1

COMPETENCY 1: OPERATE PHOTOTYPESETTER

ASSIGNMENT: Read Information Sheet No. 1 "How to Operate the Compugraphic Phototypesetter" and follow the instructions to have your file, which you edited for the last assignment, printed by the typesetter.

RESOURCES:

- Information Sheet No. 1 "How to Operate the Compugraphic Phototypesetter"
- Student disk with edited copy of the last assignment
- Compugraphic Phototypesetter
- Instructor

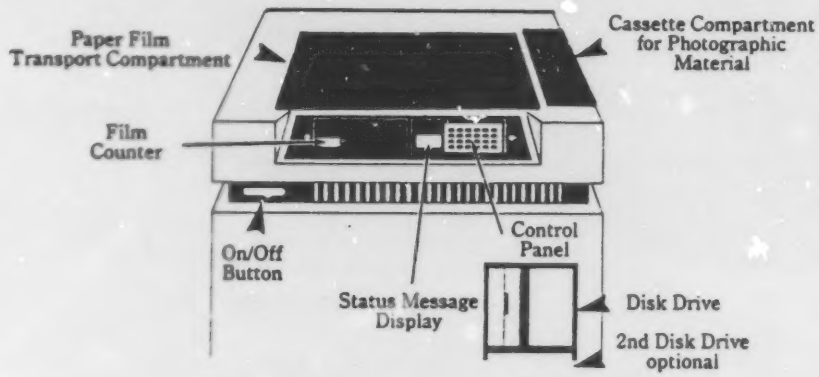
EVALUATION: Show the instructor your typeset copy after you have completed Assignments 1 and 2.

INFORMATION SHEET NO. 1

HOW TO OPERATE THE COMPUGRAPHIC PHOTOTYPESETTER

1. Insert your job disk into one of the disk drives of the MCS 10 or the cable connected MCS 5.

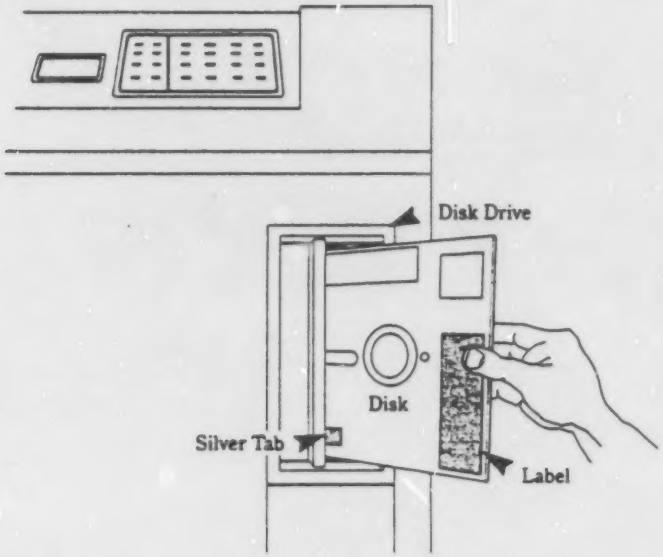
2. Turn on the phototypesetter with the rocker arm switch located in the upper left front of the typesetter when facing it. The switch will light up when the machine is running. Study this diagram, compare it with the typesetter.



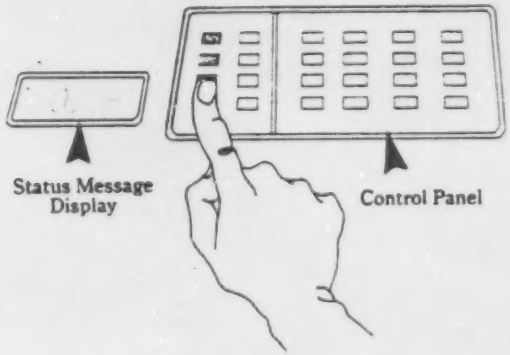
CAUTION: Make sure there are no discs in the typesetter disk drive before turning unit on, they could be damaged.

INFORMATION SHEET NO. 1 - continued

3. Remove the green label 8" floppy disk from the disk file box for the MCS 8400 Basic Program and insert disk in disk drive on the right side of the typesetter with the green label facing left and slide the gate closed.



4. Press RST (reset), LO (load) and EN (enter) buttons on the control panel of the typesetter. This will run a systems check and you will see numbers, letters and symbols flash on the status message display.



5. The systems check takes a few minutes. When the check is completed the digital display will readout **00:08**, the red pause light above the display will come on and the typesetter will beep. Programming is now complete.

INFORMATION SHEET NO. 1 - continued

6. Remove the program disk by pressing the short bar alongside the disk drive gate and replace it in its protective sleeve in the disk file.

7. Insert the 8" floppy font disk of your choice (hanging on the wall), either,
   -SouOmComsTim
   or -TriBasBemTyp
   depending on the typestyle used in your file to be sent (we used TriBasBemTyp).
   Insert it with label facing left and close disk door.

8. Make sure the typesetter is out of pause by pressing P/C (pause control) on the control panel. The pause light must be off before you can send over your copy.

9. If the digital display shows OA:33 this means that the take up cassette is missing or improperly inserted. Replace the cassette then press the P/C button on the control panel to continue. (See step 6, page 9 on how to replace the take-up cassette)

10. Now return to the MCS 10 or 5. Press the QUEUE key on the file management key pad of the MCS 5 (cable connected) or MCS 10.

11. Type TY (typesetter) and you will get a prompt for the file name. On the MCS 10 make sure that the disk drive number showing on the status line is the same one in which you have your disk (D: f1 or D: f2). Type in the file name for exercise 1 (Controller) and press EXECUTE.

12. The typesetter will beep and the digital display will show 00:10 and the "busy" light will come on and the typesetter will beep. The display will then read 00:11. The job is typeset!

13. Press P/C (pause control) and the pause light will come on.

14. Advance the paper in the typesetter by pressing FF (forward feed) once, the #3 button and FF again to advance the paper a total of 1.4 feet as shown on the film counter.

INFORMATION SHEET NO. 1 - continued

15. The take-up cassette which holds the exposed paper is ready to remove for processing. The typesetting paper is advanced from the bulk cassette across the image plate, is exposed and then feeds into the take up cassette.

16. Open the long lid and cut the paper by pulling the attached slide cutter toward you. Move the cutter back to its original position.

17. Rock the take-up cassette away from the cutter to disengage it.

18. Close the light gate on the take-up cassette and carefully remove it the cassette from the typesetter holding the paper against the cassette to avoid having the paper pull back out.

19. The typeset images are now ready to be processed.

ASSIGNMENT SHEET NO. 2

COMPETENCY 2: OPERATE PHOTO PROCESSOR

ASSIGNMENT: Read Information Sheet No. 2 "How to Operate the Photo Processor" and then process the typeset images on the take up cassette and compare your copy with the example.

RESOURCES:

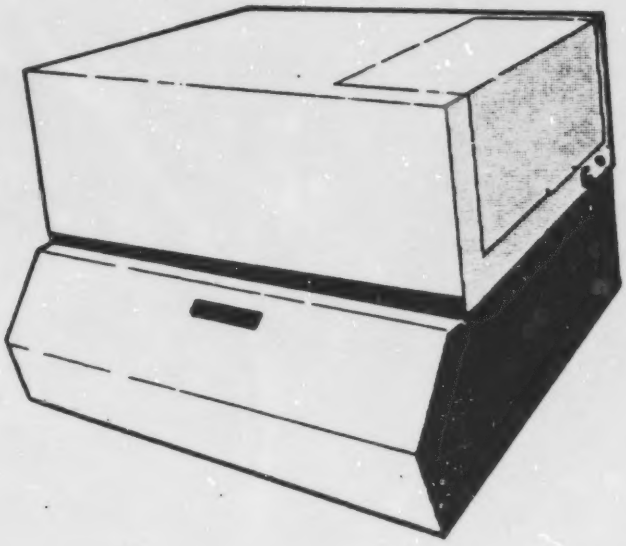
- Information Sheet No. 2 "How to Operate the Photo Processor"
- Information Sheet No. 3 "How to Bring Up the Processor in the Morning"
- Information Sheet No. 4 "Batching Jobs"
- Worksheet No. 1
- Photo Processor
- Instructor

EVALUATION: Compare your typeset copy to the example.

INFORMATION SHEET NO. 2

HOW TO OPERATE THE PHOTO PROCESSOR

1. Turn on the processor with the rocker arm switch on the lower right front side. The switch will light up when the machine is running. Lift the lid and run until the rollers are wet.



2. Place the take up cassette on the shelf. Line up the cassette on the 8" paper guide.

3. Open the cassette's light gate and pull out a total 3" of paper. Feed the paper through the slot onto the roller. When the paper is starting through close the lid of the processor. With the lid closed the processor is light tight.

4. Remove the processed paper from the slot at the back side of the processor. Find a place to lay it out to dry. The paper will stick and tear if it rolls up when it's still wet.

5. Replace the take-up cassette in the typesetter.

INFORMATION SHEET NO. 2 - continued

6. To replace the take-up cassette, open the lid and tilt the cassette to your right, placing the light gate at the top left. Then lower into position with the light gate edge depressing a **silver button** on the left inside wall. Push down firmly (very hard) until it **clicks** into place. Pull the cassette toward you to insure snug fit. It is important that the cassette be properly loaded. If not, you could waste 6 feet of paper, ruin a job or damage the typesetter.

7. Practice inserting and removing take-up cassette until you are comfortable and sure it fits properly.

8. Compare your copy with the copy below. If it is identical, go on to the next assignment.

> Controller: The controller is the power or "brains" of the MCS 5. The MCS 5 controller not only does all the thinking for the system, but also acts as a traffic director, sending information to and from the different components. In order to function properly it must be programmed with the User Program Disk[UPD] designed specifically for the MCS 5.

INFORMATION SHEET NO. 3

HOW TO BRING UP THE PROCESSOR IN THE MORNING

1. Remove the 3 flush tanks and replace with clean lukewarm water leaving at least ½ inch air space at the top.

   NOTE: Be sure to replace starter flush tank into the starter slot using the starter connector, the finish flush tank into the finish slot using the finish connector and the wash flush tank into the wash slot using the wash connector. **If you get this mixed up you will contaminate the chemicals which cost $40.00 to replace!**

2. Turn on the processor with the rocker arm switch and flush the tanks for **at least 10 minutes.**

   Then turn off and let them drain for **at least 15 minutes.**

3. Remove all flush tanks and insert starter and finisher chemical tanks usually sitting next to the machine. Empty wash tank and fill with clean lukewarm water. Slide into place with appropriate connectors.

   NOTE: Be sure to replace starter flush tank into the starter slot using the starter connector, the finish flush tank into the finish slot using the finish connector and the wash flush tank into the wash slot using the wash connector. **If you get this mixed up you will contaminate the chemicals which cost $40.00 to replace!**

4. The water tank should be emptied and replenished with fresh water several times a day or after each 20 feet of paper. Make sure the processor drained at least 15 minutes before changing to allow dirty water to drain back into tank.

To Clean the Processor At the End of the Day

1. Turn off rocker arm switch.

2. Make sure the chemicals drain for **at least 15 minutes.**

3. Remove starter and finisher chemical tanks and set aside on the counter near the processor -**Don't dump them out!**

INFORMATION SHEET NO. 3 - continued

4. Fill the flush tanks on counter with clear lukewarm water and insert connectors respectively.

5. Remove the water tank and dump out the water, then replace with clear lukewarm water and replace the connector. Turn on and flush for at least 10 minutes.

6. Turn off and drain overnight (or at least 15 minutes).

How To Turn Off The Processor Friday Night to Leave Over the Weekend

1. Clean and flush the system as usual.

2. Fill the sink halfway with warm water.

3. Open the lid to the processor to expose the roller units.

4. Remove the wire spring bail that holds the roller gear to the chain.

5. Lift out roller unit and sponge for starter, finish and wash, keeping sponge and roller units together for each section, and place into the sink to soak over the weekend.

How to Start Up the Processor Monday Morning

1. Place sponge and roller unit in appropriate trays insuring that the gears engage the chain.

2. Replace the wire spring bail and close the lid.

3. Flush the unit as usual.

INFORMATION SHEET NO. 4

BATCHING JOBS

For the preceeding assignment you typed a job, printed it on the proof printer, made corrections and then printed the job using the photo typesetter and processor. As you know by now, the process of "sending" the job to the photo typesetter and then removing the cassette and taking it to the processor for processing, can take several minutes. If two or more people are ready to process jobs, time and paper can be saved by "batching" or combining the jobs in the cassette.

To do this, first send them to the photo typesetter one at a time. This puts them all into the cassette one after the other. Now remove the cassette and process as usual. When dry, the jobs can be cut apart. With a little cooperation, much time can be saved.

There is one precaution that needs to be taken if you are batching jobs with other people or if you are printing 2 or more of your own jobs consecutively. You need to enter spacing at the end of each job so that the next job does not overlap the preceeding job. This overlapping generally occurs when the first job ended with a small type size (say 10) and the following job begins with a large type size (say 70). By adding 100 points of leading, you can be reasonably sure that the files will not overlap. This would be approximately an inch and a half.

To enter this 100 points of leading we will use the **Advance Leading** command. The command **Advance Leading** or **ALD**, allows you to specify an exact number of points for the paper to move forward. The **ALD** key is located on the top row of keys (UDK's). You mus be sure that the keyboard is not in the shift mode when you strike **ALD** or you won't get ALD. The **ALD** key produces the symbol:

〈ALD__

and waits for an amount in points. Six spaces have been allotted for this amount, entered in points and quarter points similar to the linespace command. The command is closed automatically if six digits are entered. If not, the cursor **right** key will close the command.

To review: At the end of your job strike the **ALD** key, enter 100, strike the cursor **right** key (to close the command). You have now entered 100 points of leading after your job.

INFORMATION SHEET NO. 4 - continued

Another use of Advance lead:

Leaving space for artwork - The ALD command can be used to allow space for artwork within a job. This eliminates the need for cutting copy apart on the paste-up table. If the operator knows the dimensions of the artwork, he can calculate the depth in points by multiplying inches times 72 (points per inch). Thus, for a three-inch "hole", the operator whould issue an Advance Lead command of 216 points or ⟨ALD216⟩. The paper would move forward three inches.

Recognize that this is a trade-off: time (spent in cutting and paste-up) versus money (cost of typesetting paper). For each job requiring the inclusion of artwork in the copy, you need to decide which factor is most important.

To Batch Jobs

Follow the steps given in Task 3, Information Sheet No. 1, Operation of the Photo Typesetter. The only difference is when you come to this step:

Queue, TY, filename, Execute

This step actually prints the file. Because you will print several files you need to repeat this step for each file you want printed. Then proceed with the other steps given in Task 3.

WORKSHEET NO. 1

DIRECTIONS:

Add a leading of 100 points at the end of your existing file (Controller). Then, with 2 or more students, batch your jobs through the typesetter and processor.

STUDENT EVALUATION

We need your help in the design and revision of these Competency-Based Learning Packages. Please answer the following questions, take out this page and give it to your Instructor (without your name, if you prefer).

Instructor:_____

Rate the following on a scale of 1 to 10 by circling the appropriate response.

1. Were the assignments clearly stated?

I was totally confused about what I was supposed to do				**I could usually figure out what to do**			**I understood exactly what I should do**		
1	2	3	4	5	6	7	8	9	10

Was there an assignment that seemed particularly unclear and confusing? If so, which one(s)?_____How would you improve it (them)?

2. Were the evaluation criteria clear?

I didn't understand how my work was going to be graded at all				**I understood about half of the evaluation criteria**			**I understood everything I was going to be graded on.**		
1	2	3	4	5	6	7	8	9	10

Was there an evaluation statement or Checklist statement that was especially unclear or confusing? If so, which one(s)?

_____

3. Were there any graphics (i.e., pictures, diagrams, drawings, etc.) which you found particularly unclear or confusing? If so, which one(s) and why?

4. Could this Learning Package be improved? How? Write on the back of this sheet if you need more room.

INTRODUCTION

TASK 4: LINE ENDING MODES

PURPOSE: There are 5 basic line ending modes. Designing with type requires you to be familiar with all 5 modes.

PERFORMANCE OBJECTIVE: Upon completion of this task you will be able to identify the 5 basic line ending modes and be able to set copy in each mode.

COMPETENCIES:

1. Manual and Automatic Quadding
2. Justified copy
3. Hyphenation

ESTIMATED COMPLETION TIME:

ASSIGNMENT NO. 1

COMPETENCY 1: MANUAL AND AUTOMATIC QUADDING

ASSIGNMENT: Study **Information Sheet No. 1 - 3**, and then practice on the typesetter. Complete **Worksheet No. 1 - 4.**

RESOURCES:

Information Sheet No. 1 "Manual Quadding"
Information Sheet No. 2 "Automatic Quadding"
Information Sheet No. 3 "Changing Parameters During a Job"
Worksheets No. 1, 2, 3 and 4
Compugraphic Typesetting System

EVALUATION: Your Worksheet exercises must be identical to the examples given.

INFORMATION SHEET NO. 1

MANUAL QUADDING

Quadding is the positioning of a line of type. Copy can be quadded (positioned) left, center, or right. Here are examples of each:

Text Quadded On Left Margin:

Spokane
Falls
Community
College

Text Quadded On Right Margin:

Spokane
Falls
Community
College

Text Centered:

Spokane
Falls
Community
College

Quad Left

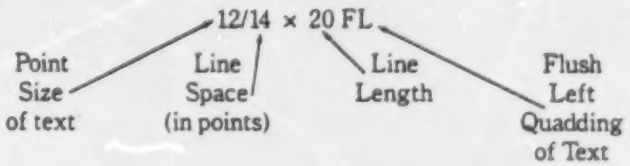
The **Left** Key, located on the right-hand side of the main keypad, is used to position text flush against the left margin. This command is used to "quad left" text within a line.

The command sequence: **Left/Return** positions copy on the left margin. The most common use of the **Left/Return** command sequence is to end paragraphs.

INFORMATION SHEET NO. 1 - continued

MARKED COPY

When you receive copy it will no doubt include the desired typesetting parameters. Here is an example:



If no designation is given for font - use a medium font.

The command for flush left (FL) is also written as QL, or the symbol ⊢ . This tells the typesetter to set the type flush against the left margin.

To set a line of type flush against the left margin strike LEFT AND RETURN after the last word on the line. Using this information complete Worksheet No. 1.

WORKSHEET NO. 1

Directions:

Study the mark-up for the typesetting parameters on the following copy. Typeset the copy using those parameters. Use QUAD LEFT for the file name.

12/14, Triumvirate x 20 FL

The term quadding
originates from hand set
composition, where metal blocks
called quads were used to fill
in blank spaces. The LEFT/RETURN
quads copy to the left.

Print your file on the proof printer. It should look like this:

```
 PS12 LS14 FT10 LL20 EL
The term quaddingQLRT
originates from hand setQLRT
composition, where metal blocksQLRT
called quads were used to fillQLRT
in blank spaces. The LEFT/RETURNQLRT
quads copy to the left.QLRT
 ALD100 EL
```

If it is identical, print it on the typesetter and compare with this:

The term quadding
originates from hand set
composition, where metal blocks
called quads were used to fill
in blank spaces. The LEFT/RETURN
quads copy to the left.

If it is identical, go on to the next assignment. If not, correct it.

INFORMATION SHEET NO. 1 - continued

Quad Right

The Right Key, located on the right-hand side of the main keypad, is used to position text flush against the right margin. This command is used to "quad right" text within a line.

The command sequence: **RIGHT/RETURN** positions copy on the right margin. To set a line of type flush against the right margin, strike **RIGHT** and **RETURN** after the last word on the line. Mark-up would be QR, FR or the symbol —┤ .

Quad Center

The command sequence: **CENTER/RETURN** positions copy in the center of a line. To set a line of type centered, strike **CENTER** and **RETURN** after the last word on the line. Mark-up would be QC, C or the symbol ├—┤.

WORKSHEET No. 2

Directions:

Study the mark-up for the typesetting parameters on the following copy. Typeset both (on the same file) using the indicated parameters. Use QUAD RIGHT for the file name.

12/14, Triumvirate x 20 QR

The term quadding
originates from hand set
composition, where metal blocks
called quads were used to fill
in blank spaces. The RIGHT/RETURN
quads copy to the right.

12/14, Triumvirate x 20 QC

WORCESTER
BRAFTON HILL PLAZA
BRAFTON STREET (ROUTE 122)

Print your file on the proof printer and compare with the following examples:

```
 PS12 LS14 FT10 LL20 EL
The term quaddingQRRT
originates from hand setQRRT
composition, where metal blocksQRRT
called quads were used to fillQRRT
in blank spaces. The RIGHT/RETURNQRRT
quads copy to the right.QRRT
 ALD20 EL
 PS12 LS14 FT10 LL20 EL
WORCESTERQCRT
BRAFTON HILL PLAZAQCRT
BRAFTON STREET (ROUTE 122)QCRT
 ALD100 EL
```

Note how the proof printer does not set copy flush right or centered but prints the quad command in bold type to show how it will be set by the typesetter.

WORKSHEET NO. 2 - continued

Print your job on the typesetter and compare it with this example:

The term quadding
originates from hand set
composition, where metal blocks
called quads were used to fill
in blank spaces. The RIGHT/RETURN
quads copy to the right.

WORCESTER
BRAFTON HILL PLAZA
BRAFTON STREET (ROUTE 122)

If it is identical, continue. If not, correct it.

INFORMATION SHEET NO. 2
AUTOMATIC QUADDING

In the previous Information Sheet you learned how to set lines flush left, flush right and centered - line by line. There is a feature which allows you to set a block of copy flush left (or right or centered) without having to enter the quad command at the end of each line. Instead, you can enter a command at the beginning of the copy that will automatically set all of the copy flush left. This feature is called automatic quadding.

You can set automatic flush left copy by pressing: **Auto Quad/L.** This will appear on the screen as ⟨AL⟩ . When text is being set automatically to the left, the other manual quadding commands (Right and Center) can be used to override the current quadding for a particular line. With the next line you will be back in automatic. To exit the Automatic Left condition, you would have to supply another automatic quadding condition (Right or Center) or deactivate the quadding program by returning to the standard justification program. You can accomplish this by the command sequence: **Auto Quad, J.** This would appear on the screen as ⟨AJ⟩ . This is automatic justification.

Using this information complete Worksheet No. 3.

WORKSHEET NO. 3

Enter the following copy under the file name: Autoleft. Use Automatic Quadding and the parameters given. (Do not worry about where the individual lines end on the screen. The machine is ending them based on the 18 pica line legnth you entered.)

12/14 X 18 FL Triumvirate

Automatic Flush Left copy can be set by using the Auto Quad Command and entering the Letter L. All copy which follows this command (AL) will be automatically quadded to the left. The quad left program can be turned off by typing another automatic quadding command (Right or Center) or by striking Auto Quad and J.

Compare your proof-printed job with the following. If they are identical, print it on the photo typesetter. If not, correct it.

```
 PS12 LS14 LL18 FT10  AL EL
Automatic Flush Left copy can be setRt
by using the Auto Quad CommandRt
and entering the letter L. All copyRt
which follows this command (AL) willRt
be automatically quadded to the left.Rt
The quad left program can be turnedRt
off by typing another automatic quad-Rt
ding command (Right or Center) or byRt
striking Auto Quad and J.RT
ALD100 EL
```

WORKSHEET NO. 3 - continued

Your photo-type set job should look like the following. If it does, continue. If not, correct it.

Automatic Flush Left copy can be set by using the Auto Quad Command and entering the letter L. All copy which follows this command (AL) will be automatically quadded to the left. The quad left program can be turned off by typing another automatic quadding command (Right or Center) or by striking Auto Quad and J.

INFORMATION SHEET NO. 2 - continued
AUTOMATIC QUADDING

In a procedure similar to the one which you completed for Automatic Left Quadding, you can establish automatic quadding for flush right and centered copy.

QUAD RIGHT

You can set automatic flush right copy by pressing: **Auto Quad, R.** This will appear on the screen as ⟨AR⟩ . When text is being set automatically to the right, other manual quadding commands (Left, Center) can be used to overrride the current quadding for a particular line. With the next line you will be back in automatic. To exit the Automatic Right condition, you would have to supply another automatic quadding condition (Left, Center) or deactivate the quadding program by returning to the standard justification program. This can be accomplished by the command sequence: **Auto Quad, J.** This would appear on the screen as ⟨AJ⟩ .

CENTERED

You can set automatically centered copy by pressing: **Auto Quad, C.** This will appear on the screen as ⟨AC⟩ . When text is being set automatically centered, other manual quadding commmands (Left, Right) can be used to override the current quadding for a particular line. With the next line you will be back in automatic. To exit the Automatic Center condition, you would have to supply another automatic quadding condition (Right, Left) or deactivate the quadding program by returning to the standard justification program. You can accomplish this with the command sequence: **Auto Quad, J.** This would appear on the screen as ⟨AJ⟩ .

You have now been shown how to enter quadded copy, either line by line or automatically. The decision of which mode to use will depend on the nature of the job you are typing. For example, a single line that needs to be set Quad Left as a heading for justified copy, would only require a quad left command at the end of that line. But if an entire paragraph were to be set quad left, you would save keystrokes (and time) by programming an Automatic Quad left at the beginning of the paragraph.

INFORMATION SHEET NO. 2 - continued

Most of the time, if quadding is required, the copy the client hands you to typeset will **not** be typed word for word exactly as it will look when you finish with it (i.e. flush right). Instead they will supply the copy and a desired line length and you simply set it automatic Quad left (or right or center) with the indicated line length and let the lines end where they may. The particular word with which a line ends is then a function of the line length, font and type size entered.

But occasionally, a client will want each line of the copy to "break" on a particular word. The copy they give to you **will** indicate which word should end each line - for this kind of job, even though there may be many lines to set quadded, you will need to enter the quad command at the end of each line so you can control on which word each line will end.

INFORMATION SHEET NO. 3

CHANGING PARAMETERS DURING A JOB

You have been shown how to enter your basic parameters at the beginning of a job. This included line length, line space, font and type size. These were entered at the beginning of the file using the UDK keys and followed by the **End line** keystroke. Then you were ready to type the copy.

In the next worksheet you will be asked to set copy using the automatic quadding functions. The font and size may change from line to line. This will require you to change these parameters several times. To do this, you simply enter the appropriate change immediately before the word or line that requires the change (remember to close the command with a cursor right arrow).

In the following example we want to make the word "will" bold.

"You will attend the meeting'

To do this, enter a bold font before you type will and then change your font back to a medium font before you type attend.

"You **will** attend the meeting"

This is how it would look on the screen as you type it:

"You ⟨FT12⟩**will** ⟨FT10⟩attend the meeting"

If we wanted to change the whole line to bold, or the type size of every letter in the line, we would have entered the appropriate command at the beginning of the line.

WORKSHEET NO. 4

Create a new file: Autoright

Enter the two following jobs according to the mark-up. After printing them compare with the examples given. If they are identical, continue on. If not identical, correct until they are identical.

Notice that in this copy there is 20 points of leading at the end of each paragraph. Use the **ALD** key to enter this leading at the end of the last line of each paragraph, before pushing **RETURN**.

Our teaching staff is creative and well qualified. Our focus is geared to the family and the role of the individual. Classes are offered for every age group.

Triumvirate 11/12 x 11.9 /20

FR

Join our staff in discovering your many talents which can help your family better understand itself. Explore careers, interests, hobbies. Exercise in our gymnasium and attend the family seminars. /20

Daily hours are from 9:00 to 5:00 P.M. Evening sessions start at 7:00 P.M. and go until 10:00 P.M. /20

12/10 BOLD

10/10 BOLD

Big School
41 South Street
Haurent, Mass
999-9000 /30

This copy has leading changes with every line. Use the **LS** key for these changes.

Triumvirate Bold 18/16 — QC PROFESSIONAL TAILORS

12/14 — Complete Department For
12/20 — Men's & Women's Alterations

12/14 — Zipper & Heavy Coat Repair
12/16 — Invisible Mending

12/12 Bold

125 Southerly Avenue
Unover, MA
Tel. 084-0505

BEST COPY AVAILABLE

WORKSHEET NO. 4 - continued

Your proof-printed jobs should look like this:

```
 FT10 PS11 LS12 LL11.9 AR EL
Our teaching staff isRt
creative and well qualified.Rt
Our focus is geared to theRt
family and the role of theRt
individual. Classes are of-Rt
fered for every age group. ALD20 RT
Join our staff in discoveringRt
your many talents whichRt
can help your family betterRt
understand itself. ExploreRt
careers, interests, hobbies.Rt
Exercise in our gymnasiumRt
and attend the familyRt
seminars. ALD20 RT
Daily hours are from 9:00Rt
to 5:00 P.M. Evening ses-Rt
sions start at 7:00 P.M.Rt
and go until 10:00 P.M. ALD20 RT
 PS12 LS10 FT12 EL
Big SchoolRT
 PS10 41 South StreetRT
Haurent, MassRT
999-9000RT
 ALD30 EL
 LL20  PS18 LS16 FT12 AC EL
PROFESSIONAL TAILORSRT
 FT10  PS12  LS14 Complete Department ForRT
 LS20 Men's & Women's AlterationsRT
 LS14 Zipper & Heavy Coat RepairRT
 LS16 Invisible MendingRT
 PS12 LS14 FT12 125 Southerly AvenueRT
Unover, MART
Tel. 084-0505RT
 ALD100
```

If they do, continue. If not, correct them.

WORKSHEET NO. 4 - continued

Your typeset job should look like this:

Our teaching staff is creative and well qualified. Our focus is geared to the family and the role of the individual. Classes are offered for every age group.

Join our staff in discovering your many talents which can help your family better understand itself. Explore careers, interests, hobbies. Exercise in our gymnasium and attend the family seminars.

Daily hours are from 9:00 to 5:00 P.M. Evening sessions start at 7:00 P.M. and go until 10:00 P.M.

Big School
41 South Street
Haurent, Mass
999-9000

PROFESSIONAL TAILORS

Complete Department For
Men's & Women's Alterations

Zipper & Heavy Coat Repair
Invisible Mending

125 Southerly Avenue
Unover, MA
Tel. 084-0505

If they do, continue. If not, correct them.

QUICK REFERENCE
OPERATING PROCEDURES

ENTERING A FILE

1. **New File,** file name, **Execute**
2. **Compose, Execute**
3. Enter parameters and text.
4. **Append,** Execute
5. **Close File, Execute**

EDITING A FILE

1. **Call Page,** filename, **Execute**
2. Make corrections
3. **Limit, Scroll Up, Compose, Execute**
4. **Replace Page, Execute**
5. **Close File, Execute**

TYPESETTING A FILE - 8400

1. **Queue, TY,** filename, **Execute** (repeat as necessary if batching)
2. Press P/C on the 8400 control panel,
3. Wait for 00:11 display code then press **FF, 3, FF**
4. Cut film and remove cassette.
5. Process film and replace cassette in 8400

FINAL REPORT

Project No. 84 - ASU(159)NB

Updating Visual Media Technician Program's "Graphic I"

Curriculum Development Project
Conducted Under
Public Law 94-482

Dr. Edwin K. Hill - Project Director
Spokane Falls Community College
West 3410 Fort George Wright Drive
Spokane, WA 99204

December 20, 1984

Project #84-ASU(159)NB - Updating Visual Media Technician Program's "Graphic I"
Dr. Edwin K. Hill

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Summary of Report
Project #84-ASU(159)NB

This final report covers the project activity started in January 1984 and completed in December 1984.

Objectives

Major Objective

To update and revise the "Graphics I" course to include new computer graphics and typesetting technologies by producing a finished and printed competency-based curriculum with AV materials and by re-naming the course "Graphics Technology."

Sub-objective one:

To review literature and curriculum materials through an ERIC search and a search of the Northwest Vocational Management Center in Olympia.

Sub-objective two:

To contact advisory board members, experts in the field of computer graphics and typesetting, other educators and manufacturers to gather information and get feedback on the "Graphics Technology" curriculum as it is developed.

Sub-objective three:

To review "Graphics I" curriculum and related AV material as it is currently taught.

Sub-objective four:

To organize the information gathered on the new graphics technologies and integrate with revised and re-organized "Graphics I" curriculum to produce a competency-based curriculum for "Graphics Technology."

Sub-objective five:

To develop performance standards for each Competency to ensure the competence of the student's performance.

Sub-objective six:

To develop both written and performance tests in order to evaluate student performance relative to performance standards as defined through sub-objective five.

Sub-objective seven:

To design and produce AV materials to supplement competency-based modules.

Sub-objective eight:

To develop an evaluative tool to be used to gather feedback from students taking the course to help with its revision.

Procedure

The following activities and time lines were followed to accomplish the stated objectives.

		TIME LINE
1.	Reviewed curriculum materials and other literature related to graphic technologies secured through ERIC search and through Northwest Vocational Curriculum Management Center in Olympia.	Ongoing through project
2.	Contacted advisory board members, experts in the field, other educators and manufacturers to gather information relevant to the development of the "Graphics Technology" curriculum.	Ongoing through project
3.	Reviewed "Graphics I" curriculum.	Jan. - 1984
4.	Organized the information gathered on the new graphic technologies and integrated with revised and re-organized "Graphics I" curriculum to develop competency-based modules for "Graphics Technology " course.	Feb. - 1984
5.	Developed performance standards for each competency.	Feb. - Sept.
6.	Developed both written and performance tests to evaluate student competence.	Feb. - Sept.
7.	Designed AV materials to supplement competency-based modules (incorporated into student handbook).	Feb. - Sept.
8.	Produced and printed competency-based modules.	Feb. - Sept.
9.	Developed evaluation tool to gather student feedback to assist in course revision.	Oct. 1984

Results and Accomplishments

Sections of the course have been tested with a sample group of students. Revision followed and the competency based modules were then produced. This represents a major improvement in the Visual Media curriculum that will be available to students. It should improve the overall quality of the program and result in better trained Visual Media technicians. These materials will be available to other interested programs.

Evaluation

As the materials for this course were developed, they were evaluated by an instructional designer for form and concept. Technical information was checked with a variety of consultants available on campus. The rough draft of material was tested with students in the program and other staff members. Revision resulted from each of these evaluations and will continue through the first year of use. Content in this field is constantly changing so revision will need to continue.

Conclusions and Recommendations

This has been a worthwhile project that has helped bring curriculum in the Visual Media program current with technology used in the industry. A great deal of time is needed to do this type of curriculum revision if programs are to stay current. This grant has made it possible to update this section of the program and other resources will be sought to continue the work. This approach seems to be effective and results in a quality product.

Body of Report

The Visual Media Technician program at Spokane Falls Community College has, since its inception nine years ago, been focused on the mastery and application of industrial media production systems. These systems include information design, audiovisual, photographic, television, pre-press technologies and newer computerized typesetting.

It is not in the student's or college's best interest to provide programs for the operation and mastery of equipment no longer used by industry. Locally and internationally, industry is now or soon will be using more modern computerized systems for graphic design and production. We believe it is imperative to pursue this direction of development as much as is possible within the scope of the VMT program.

Therefore, the curriculum currently used by the Visual Media Technician program must be updated and revised to include course work that relates to computer typesetting and computer graphics. A course such as "Graphics I" needs to be revised and reorganized to include curriculum material related to both traditional graphic and computer-based technologies and be re-named "Graphics Technology."

The "Graphics Technology" course will prepare students for employment in both the more traditional paper-based graphic design shops and in those shops and industrial settings which utilize the new computer graphic and computer typesetting technologies. Such a course will lessen the student's fear of computers and increase their confidence level in working in such rapidly changing, increasingly computerized field.

Objectives and Sub-Objectives

To update and revise the "Graphics I" course to include new computer graphics

and typesetting technologies by producing a finished and printed competency-based curriculum with AV materials and by renaming the course "Graphics Technology."

Sub-Objective one:
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To contact advisory board members, experts in the field of computer graphics and typesetting, other educators and manufacturers to gather information and get feedback on the "Graphics Technology" curriculum as it is developed.

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To organize the information gathered on the new graphics technologies and integrate with revised and re-organized "Graphics I" curriculum to produce a competency-based curriculum for "Graphics Technology."

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To design and produce AV materials to supplement competency-based modules.

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To develop an evaluative tool to be used to gather feedback from students taking the course to help with its revision.

Procedure
The following activities and time lines were followed to accomplish the stated objectives.

		TIME LINE
1.	Reviewed curriculum materials and other literature related to graphic technologies secured through ERIC search and through Northwest Vocational Curriculum Management Center in Olympia.	Ongoing through project

Conclusions and Recommendations

This has been a valuable project for the Visual Media program at SFCC. It has assisted in the updating of curriculum in this program and adapted yet another segment of the instruction to the competency-based format. The goal is to eventually have the program 100% competency based instruction. This type of work is time consuming and requires a number of resources. It was fortunate the grant was made available to do this work as college resources are limited. Future work of this nature is necessary and efforts to support this activity will continue.

The students in this program will benefit from an up to date training opportunity and employers will benefit from the quality product graduated from this program.

This curriculum is available to other programs around the state and throughout the nation. Dissemination of these materials will be made possible through such organizations as the Northwest Vocational Curriculum Management Center, The Research Coordinating Unit, The National Center for Vocational Research and others as appropriate.